

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2003-051809

(43)Date of publication of application : 21.02.2003

(51)Int.Cl.

H04J 14/00

G02F 2/00

H04B 10/00

H04J 14/02

(21)Application number : 2001-238077

(71)Applicant : NIPPON TELEGR & TELEPH CORP <NTT>

(22)Date of filing : 06.08.2001

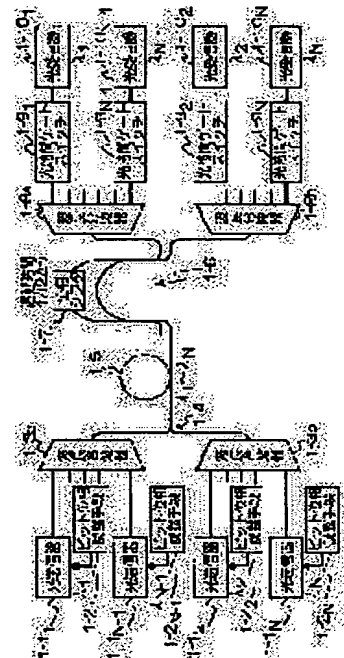
(72)Inventor : YAMADA HIDEKAZU
YOSHIKUNI YUZO
SANJO HIROAKI

(54) WAVELENGTH MULTIPLEX OPTICAL TRANSMISSION SYSTEM AND TRANSMISSION METHOD

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a wavelength multiplex optical transmission system and a transmission method with an excellent band utilization efficiency.

SOLUTION: The wavelength multiplex optical transmission system is provided with an optical transmitter 1-1 that generates N optical signal waves modulated with an optical frequency interval Δf [Hz] at a modulation speed B [bit/s] (where $B/\Delta f \leq 1$ [bit/s/Hz]), wavelength synthesizers 1-3a, b that synthesize them, an asymmetrical Mach-Zehnder interferometer element 1-6 whose optical path length difference is $c/(2nc\Delta f)$ (where c is the velocity of light and nc is an equivalent refractive index of a guide path) incorporating a phase shifter 1-7, wavelength branching devices 1-8a, b that selectively transmit an optical signal with a desired wavelength, an optical time gate switch 1-9 that extracts a signal for a time from $1/(2\Delta f)$ [s] to T [s] (where T is a one-bit time) in the unit of bits, and a bit phase adjustment means 1-2 that matches bit phases of wavelength signals at the input of asymmetrical Mach-Zehnder interferometer element 1-6.



LEGAL STATUS

[Date of request for examination]

11.12.2003

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]